Antenna Test Report

Customer name:

Project name:C300

Designer:Engineer Zhou

Date:2025-7-14

Electrical Specification	
Frequency Range（MHz）	700-960MHz;1710-2690MHz
Impedance（Ω）	50Ω
Direction	Omnidirectional
Polarization	Linear polarization
Mechanical Specification	
Material	FPC
RF Cable	no
Connector Type	no
Environmental Specification	
Operation temp	-20℃～+85℃

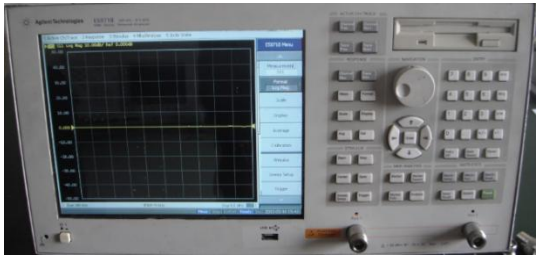
Test Equipment Description

4*4*3m ETS Chamber

CMW500

Agilent 8960

MT8820C

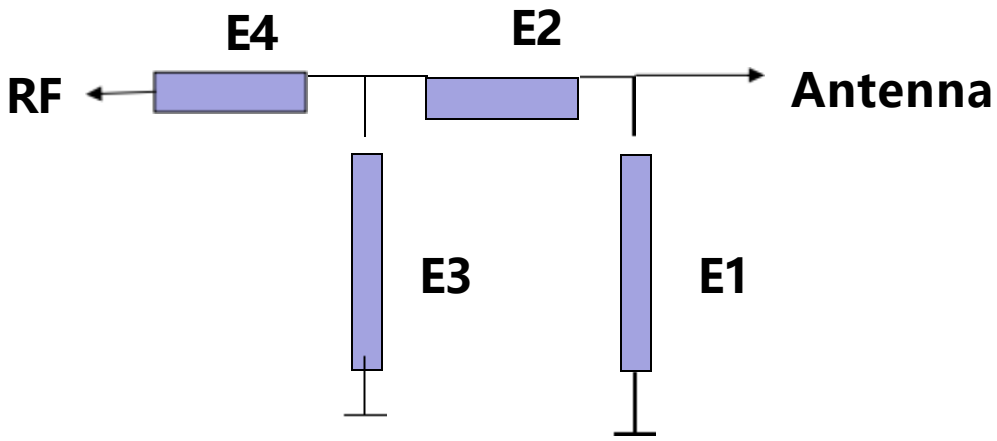


Agilent E5071B

Test system	Environmental	Active test	Passive test
OTA Chamber	Temp:20℃ ±5℃ Hum:45% ±15%	2G/3G/4G WIFI/NB/BT	700MHz-6GHz

Match the circuit diagram

Element	E1(0402)	E2(0402)	E3(0402)	E4(0402)
Value				



The matching circuit has not been modified

Test data

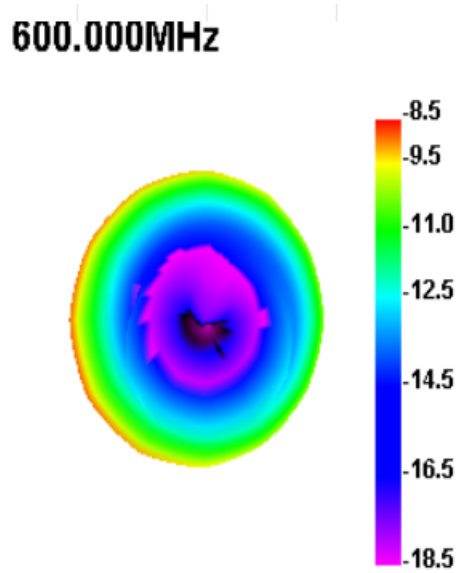
Freq (MHz)	Effi (%)	Gain (dBi)
600	6.18	-8.5
610	6.44	-8.36
620	7.93	-7.48
630	7.37	-7.82
640	10.78	-6.57
650	10	-6.49
660	12.28	-5.2
670	12.24	-4.94
680	11.45	-5.01
690	12.96	-4.35
700	13.81	-4.3
710	17.78	-3.25
720	19.57	-2.76
730	17.37	-3.33
740	12.49	-4.58
750	13.72	-4.8
760	10.14	-2.09
770	10.26	-2.66
780	12.55	-2.25
790	16.45	-2.04
800	21.16	-1.72
810	26.83	-1.44
820	34.12	-1.11
830	35.08	-1.36
840	35.06	-1.57
850	35.15	-1.56

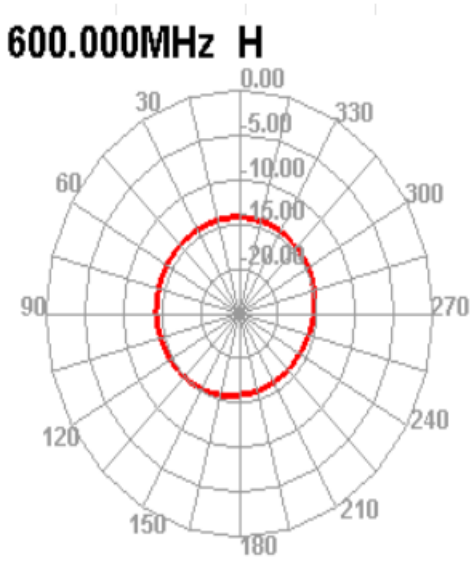
Freq (MHz)	Effi (%)	Gain (dBi)
860	37.19	-1.2
870	33.38	-1.58
880	32.49	-1.31
890	36.81	-0.62
880	32.49	-1.31
890	36.81	-0.62
900	34.42	-0.46
910	37.32	0.01
920	34.92	0.14
930	29.86	-0.48
940	23.99	-0.97
950	21.37	-1.33
960	13.88	-2.99
970	11	-4.11
980	7.21	-6.15
990	5.01	-8.08
1000	3.99	-9.6

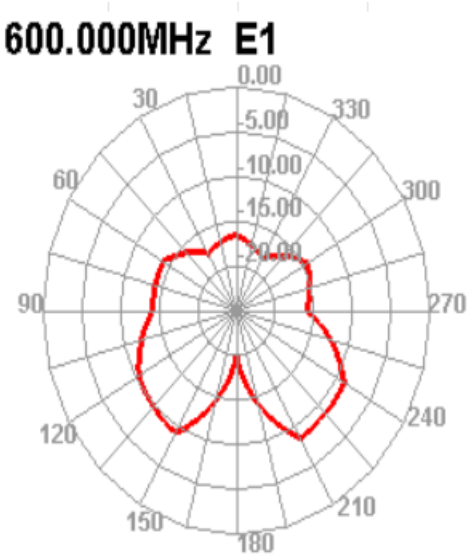
Freq (MHz)	Effi (%)	Gain (dBi)
1700	48.41	2.24
1720	75.72	3.57
1740	74.92	3.07
1760	77.3	2.68
1780	74.44	2.34
1800	49.64	0.35
1820	54.67	1
1840	50.46	1.05
1860	45.56	0.94
1880	47.3	1.25
1900	45.15	1.14
1920	48.46	1.34
1940	54.72	1.87
1960	57.67	2.12
1980	57.14	2.21
2000	56.41	2.07
2020	41.91	1.21
2040	39.7	0.96
2060	34.28	0.39
2080	32.66	0.06
2100	29.66	-0.43
2120	29.64	-0.66
2140	38.17	0.14
2160	34.82	-0.57
2180	36.62	-0.53
2200	39.75	-0.25

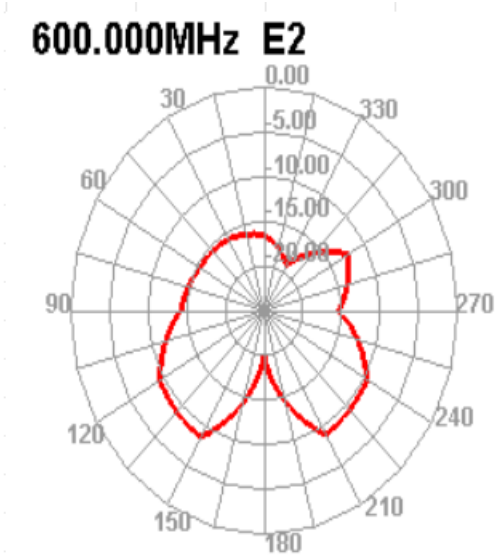
Freq (MHz)	Effi (%)	Gain (dBi)
2220	34.39	-0.9
2240	34.2	-0.88
2260	33.25	-0.89
2280	31	-0.86
2300	35.55	-0.06
2320	34.76	-0.05
2340	33.22	-0.2
2360	35.64	0.04
2380	35.21	-0.14
2400	38.78	0.16
2420	46.24	0.97
2440	52.25	1.48
2460	59.38	2.13
2480	70.26	3.05
2500	69.35	3.02
2520	78.02	3.5
2540	71.1	3.01
2560	60.77	2.37
2580	70.35	3.12
2600	65.95	2.87
2620	61.9	2.57
2640	66.56	2.8
2660	55.15	1.88
2680	49.24	1.4
2700	50.95	1.46

Antenna Radiation pattern









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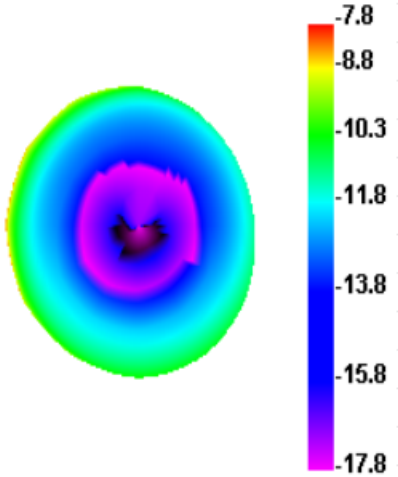
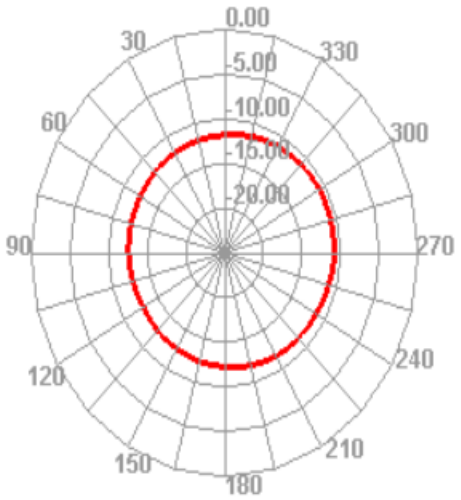
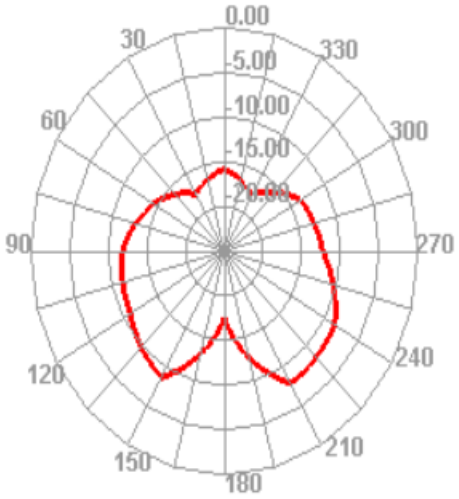


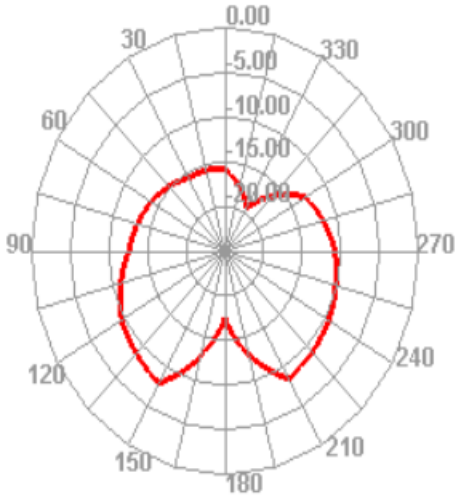
630.000MHz H



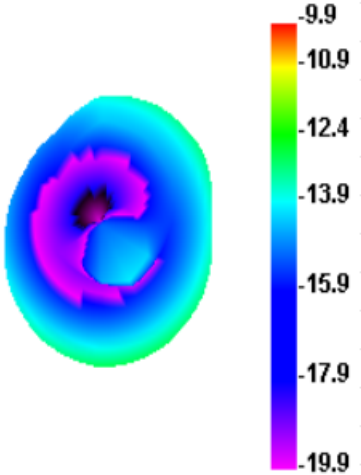
630.000MHz E1



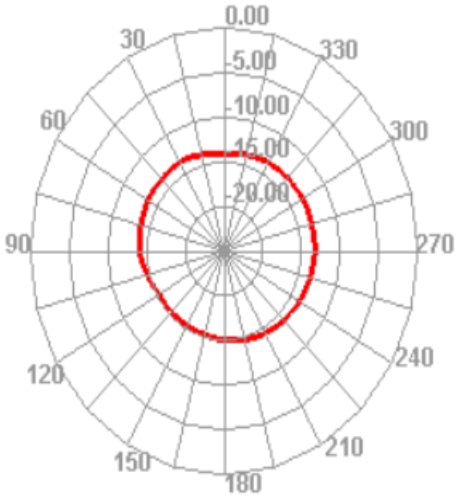
630.000MHz E2



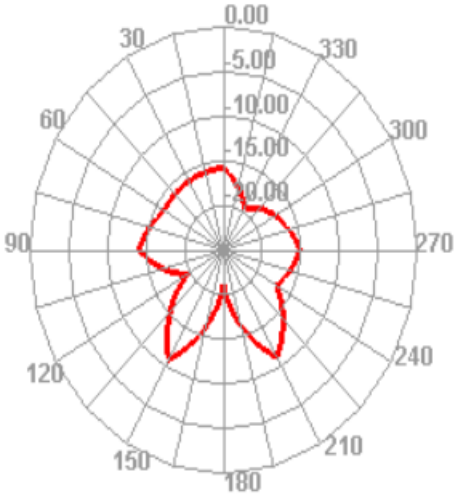
800.000MHz



800.000MHz H



800.000MHz E1



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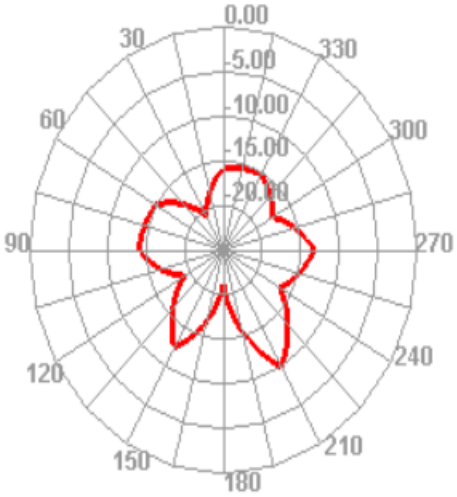
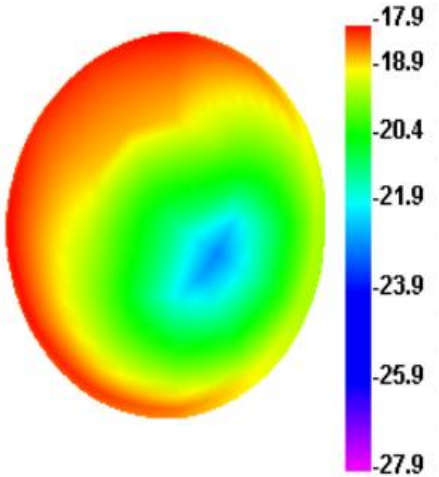
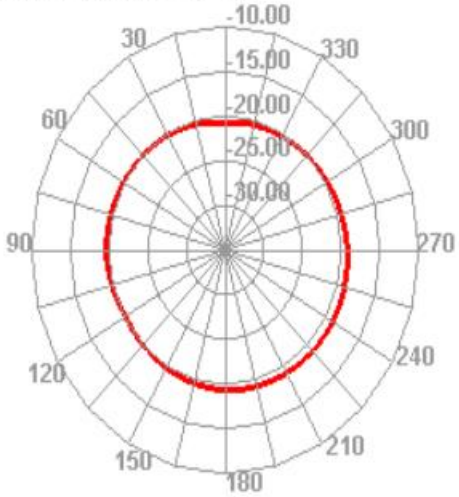


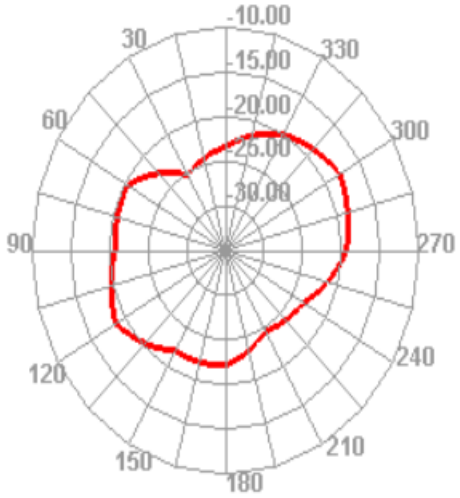
960.000MHz



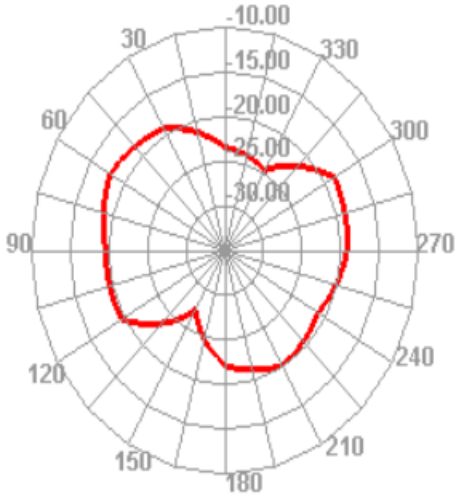
960.000MHz H



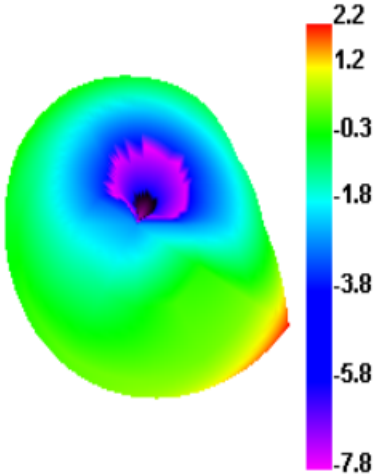
960.000MHz E1



960.000MHz E2



1700.000MHz



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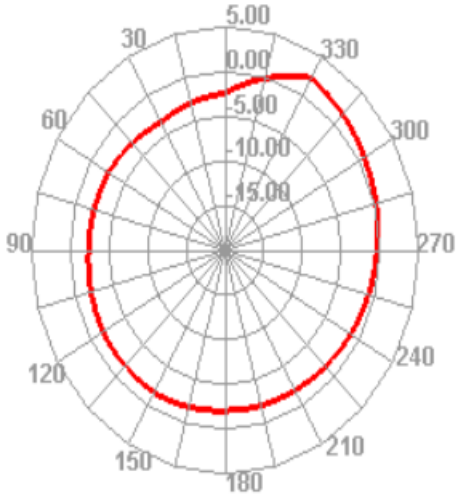
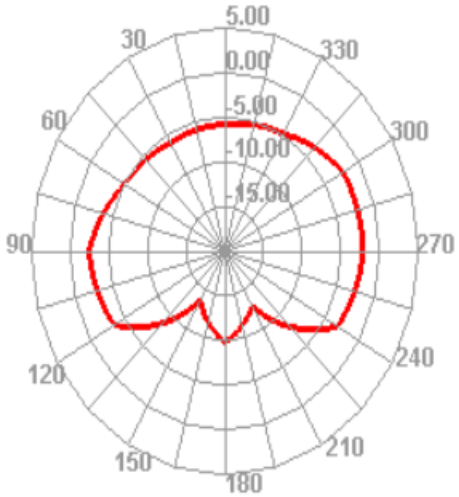
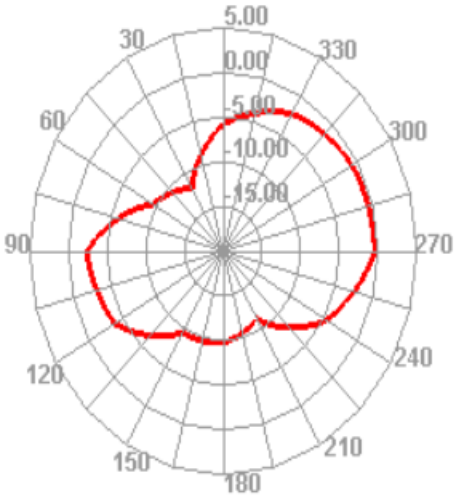


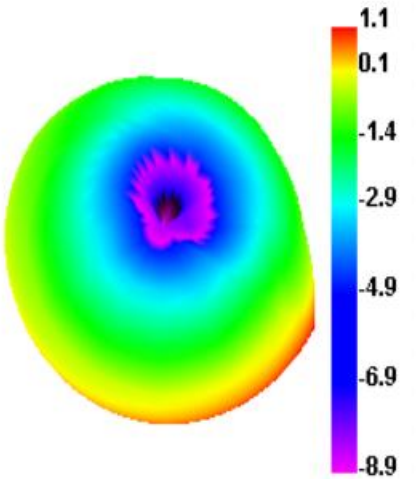
1700.000MHz E1



1700.000MHz E2



1840.000MHz



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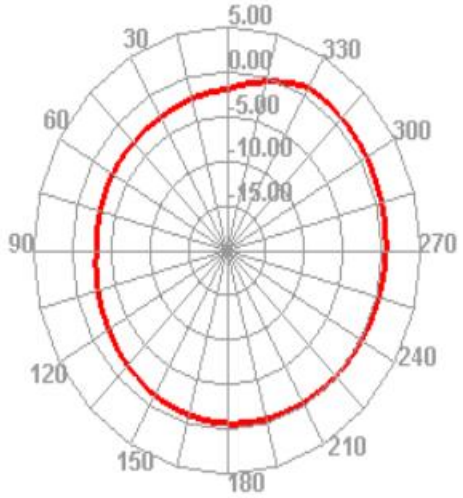
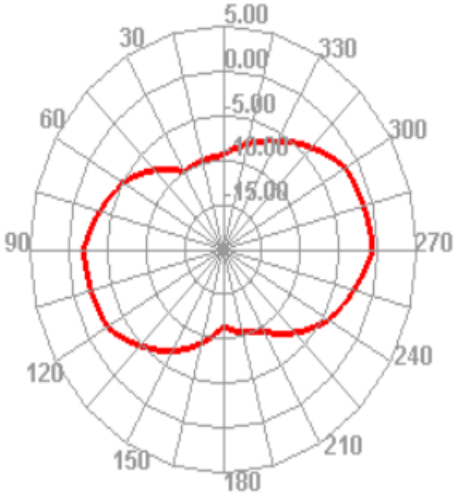
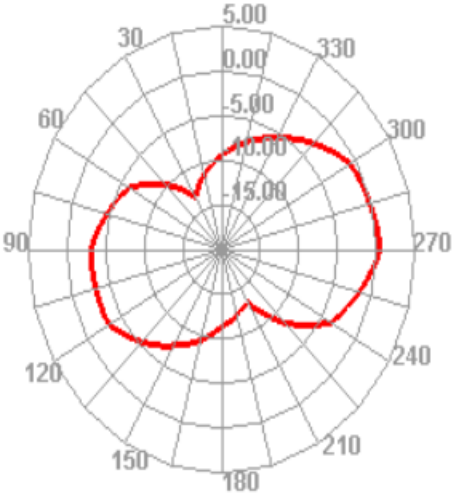


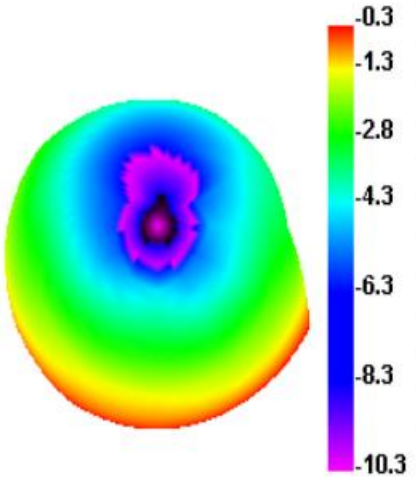
1840.000MHz E1



1840.000MHz E2



2200.000MHz



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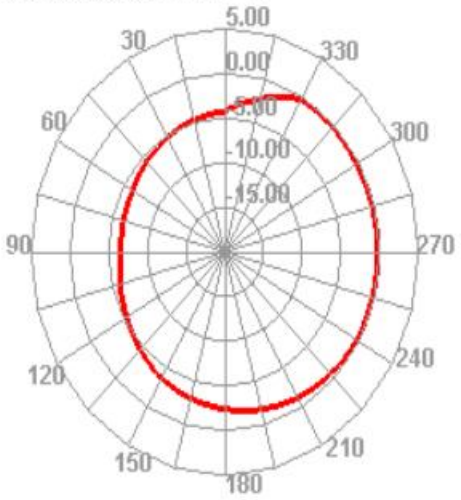
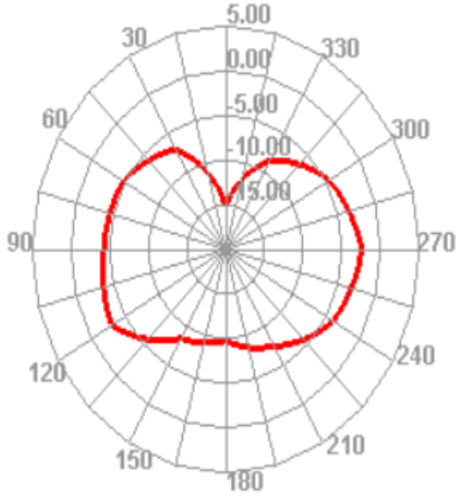


2200.000MHz E1



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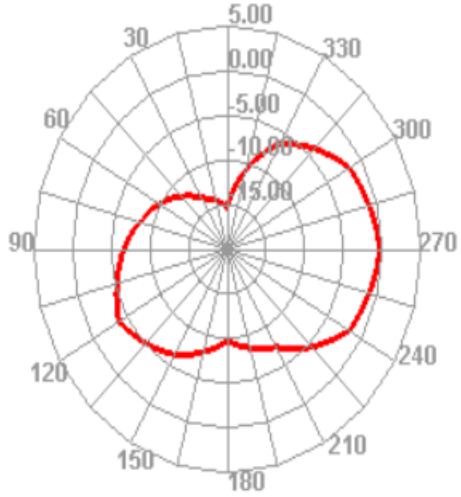

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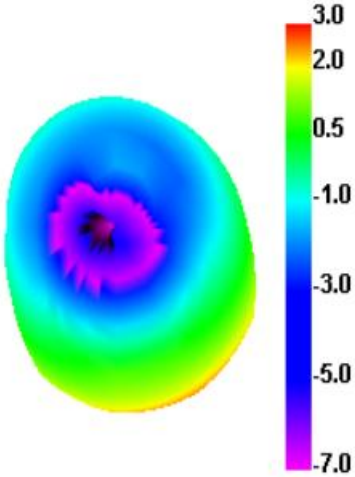

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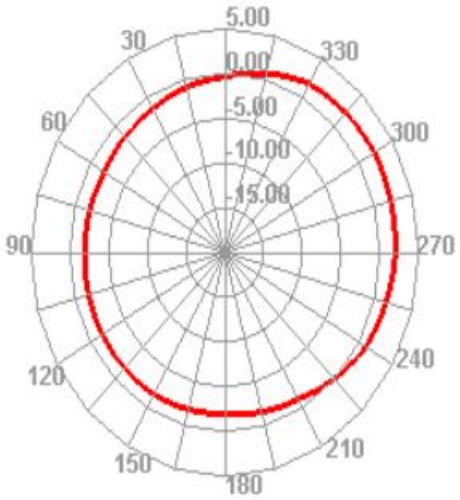

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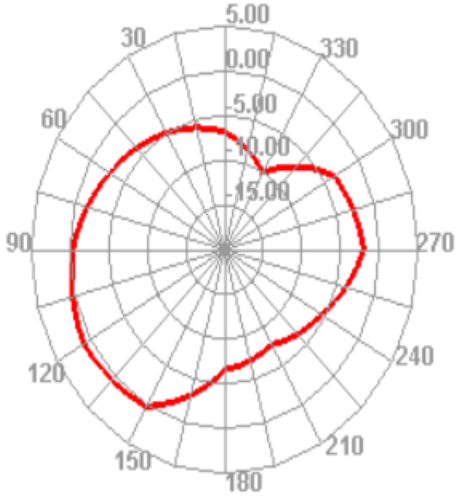

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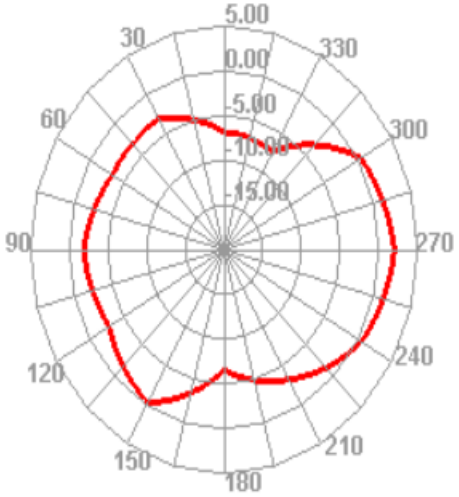
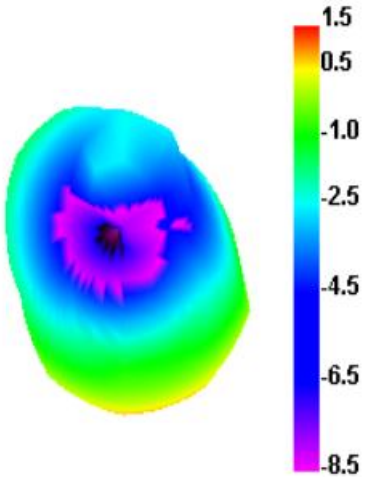


2700.000MHz



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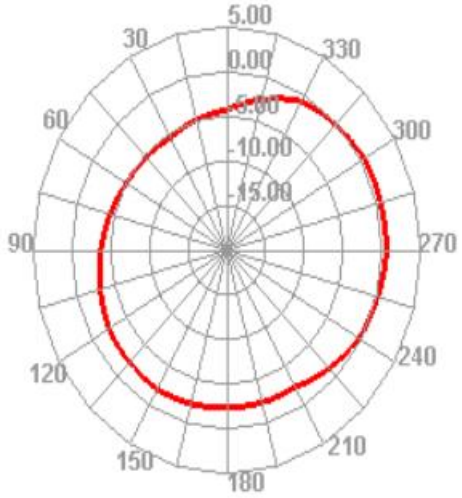
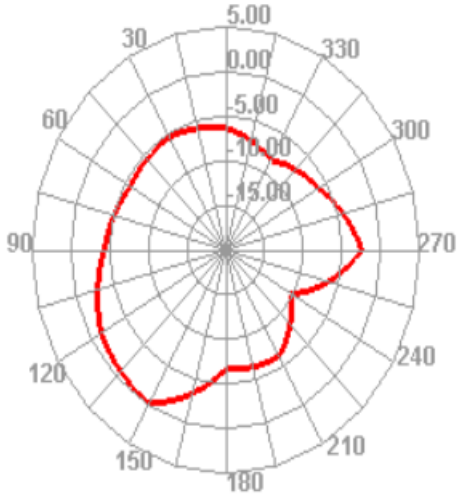


2700.000MHz E1



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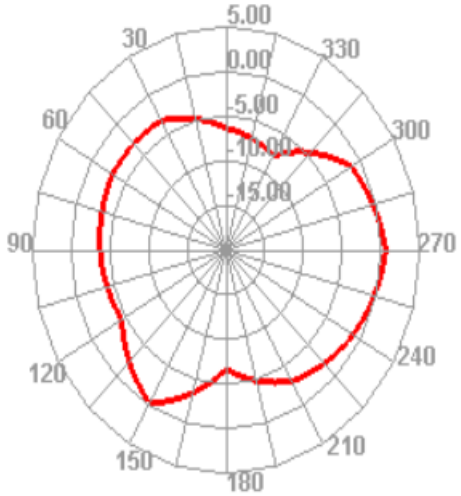
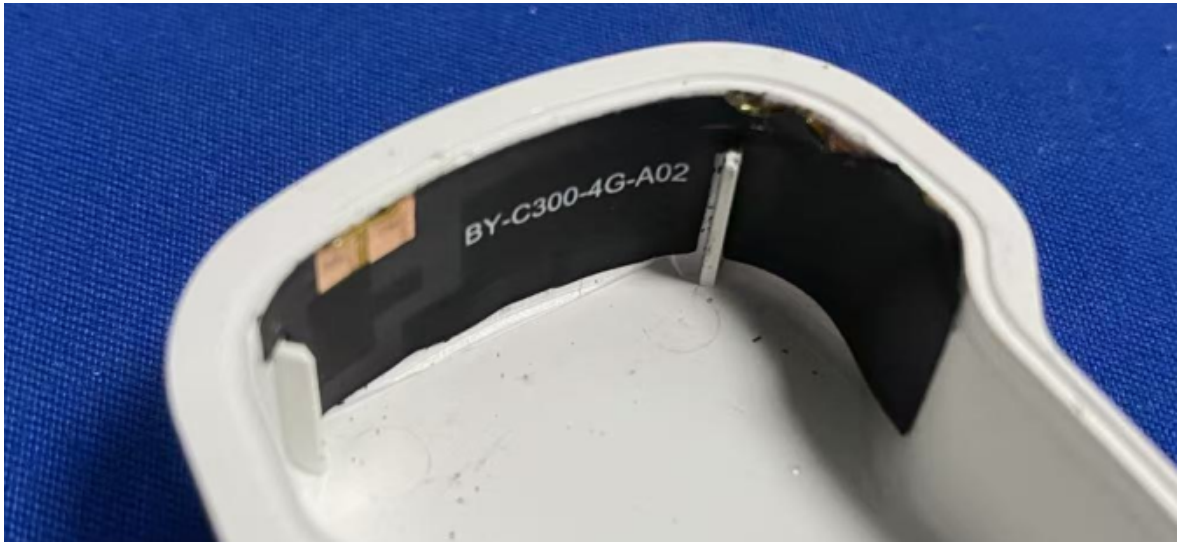


Antenna size



Thanks for your valuable comment!